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Change Number	Date	Document Number	Document Title	Section/Page Modified	Description of Change (s)	Resp. Manager Approval	Compliance Approval	ESH&Q Approval	Rad. Eng. Approval	Quality Assurance	Completion of ADM 2.01 Checklist	Completion of of SES/USOD Checklist
2	9/3/97	RF/RMRS-97-036	SAP for the Aco Remedial	1.4/4	Add 2 soil borings based on anomalous PID readings	M. Ward	NA mw	NA mw			yes	yes

M. Ward Submitted to Doc Control on 9-4-97

ADMIN RECORD
1170-A-00012

DOCUMENT CLASSIFICATION
REVIEW WAIVER PER
CLASSIFICATION OFFICE

1.3 Objectives

The objective of this investigation will be to evaluate a total of five areas. The three soil gas survey anomalies, and two areas of surficial oil staining in the east central portion of IHSS 170, which are not proximal to soil gas survey points will be investigated. The objectives of this investigation are as follows:

1. locate the source of the VOC groundwater plume; and
2. define the vertical and areal extent of residual VOC contamination equal to or greater than the RFCA Tier I subsurface soil action levels.

1.4 Methodology

The following methodology will be utilized.

- Initial soil borings will be located in the area of the three soil gas surveys with chlorinated VOC anomalies previously identified for a total of 13 borings (Figure 1-1).
- Each surface soil sample location with detectable chlorinated VOCs will have one soil boring and the two small oil stained areas will have a minimum of one soil boring for a total of four soil borings (Figure 1-1).
- Two soil borings will be located over two attempted well point locations approximately 570 and 680 feet east of IHSS 170 where anomalous organic vapor readings were observed by the Well Abandonment and Replacement Program on August 28, 1997.
- Groundwater samples will be collected for VOC screening through the hollow-stem auger, geoprobe, or open borehole from each area.
- Additional boring locations will be modified in the field on the basis of the analytical results as obtained.
- Investigative findings will be summarized and documented in a final report.

No. 2
9-3-97

This SAP describes the specific data needs, sampling and analysis procedures and requirements, data handling procedures, and associated Quality Assurance/ Quality Control (QA/QC) requirements for completion of soil and groundwater sampling. The SAP contains the following sections: Section 2 presents the sampling and data quality objectives; Section 3 presents the sample collection and analysis methodology; Section 4 presents the data management and documentation; Section 5 presents the project organization; and Section 6, references.

2.0 SAMPLING AND DATA QUALITY OBJECTIVES

This section of the SAP describes the sampling and data quality objectives for the pre-remedial investigation of IHSSs 170, 174a, and 174b. This investigation is driven by DOE Order 5400.1, RFETS protection of groundwater and the RFCA (DOE, 1996), to determine if VOC levels in subsurface soil are greater than or equal to RFCA Tier I Subsurface Soil Action Levels, and to provide additional data for an accelerated remedial action. Data requirements to support this project were developed using criteria established in *Guidance for the Data Quality Objective Process*, EPA QA/G-4 (EPA, 1994). The data gaps, study boundaries, and decisions are described below.

The primary data gap is the lack of subsurface VOC data in soil and groundwater. Soil samples will be collected for VOC analyses to evaluate subsurface soil for VOC contamination equal to or greater than the RFCA Tier I Subsurface Soil Action Levels (DOE, 1996). Groundwater samples will be collected to evaluate groundwater for VOC contamination to assist with source delineation. Four groundwater monitoring wells were installed to the north, east, west, and south

of IHSS 170 as shown on Figure 1-1, as part of the Groundwater Monitoring Program FY97 Well Abandonment and Replacement Program and agreed to by the regulators.